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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,806	11/26/2003	Charles L. Compton	CCCI 0114 PUS	9770
22045	7590	04/06/2005		
BROOKS KUSHMAN P.C. 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075			EXAMINER LEE, DAVID J	
			ART UNIT 2633	PAPER NUMBER

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/723,806	<b>Applicant(s)</b> COMPTON ET AL.	
	<b>Examiner</b> David Lee	<b>Art Unit</b> 2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 6-10, and 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Sayyah et al. (US Pub. No. 2003/0002099 A1).

Regarding claims 1 and 8, Sayyah teaches an apparatus for use in an HFC network (paragraph 0003, line 4) to provide the HFC forward path spectrum from the head end (fig. 9, 911) to a network fiber node (fig. 9, 160), the apparatus comprising: a head end modulator (fig. 9, 911) directly receiving a switchable digital data signal (fig. 9, 106) and internally processing the switchable digital data signal to produce the HFC forward path spectrum that directly drives the network fiber node (fig. 9, head end modulator 911 processes 106 with 109).

Regarding claims 2 and 9, Sayyah teaches that the head end modulator generates an analog optical signal for the network fiber node (fig. 9, 910).

Regarding claims 3 and 10, Sayyah teaches that the head end modulator processes the switchable digital data signal to dynamically allocate bandwidth to

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different services (fig. 9,  $\lambda_1$ ,  $\lambda_2$ ,  $\lambda_3$ ,  $\lambda_4$  each have a different bandwidth that can be allocated to different desired destinations. See also paragraph 0003, lines 3-6).

Regarding claims 6 and 13, Sayyah teaches that the switchable digital data is received as a single digital data signal input (fig. 9, 106 –  $d_1(t)$ ).

Regarding claims 7 and 14, Sayyah teaches that the switchable digital data is received as a plurality of digital data inputs (fig. 9, 106 –  $d_1(t)$ ,  $d_2(t)$ ,  $d_3(t)$ ,  $d_4(t)$ ).

3. Claims 1-3 and 6-10 and 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Farhan et al. (US Patent No. 6,519,067 B2).

Regarding claims 1 and 8, Farhan teaches an apparatus for use in an HFC network (col. 6, line 10) to provide the HFC forward path spectrum from the head end (fig. 5) to a network fiber node (fig. 6), the apparatus comprising: a head end modulator directly receiving a switchable digital data signal (fig. 5, 210) and internally processing the switchable digital data signal to produce the HFC forward path spectrum that directly drives the network fiber node (fig. 5 – through digital pilot tone generator 210 and A/D 505).

Regarding claims 2 and 9, Farhan teaches that the head end modulator generates an analog optical signal for the network fiber node (fig. 5, 205 and 502).

Regarding claims 3 and 10, Farhan teaches that the head end modulator processes the switchable digital data signal to dynamically allocate bandwidth to different services (col. 6, lines 7-11).

Regarding claims 6 and 13, Farhan teaches that the switchable digital data is received as a single digital data input (fig. 5, 502 to 205).

Regarding claims 7 and 14, Farhan teaches that the switchable digital data is received as a plurality of digital data signal inputs (fig. 5, 502 to 205 and 503 to 505).

Regarding claim 15, Farhan teaches a system for use in an HFC network to provide the HFC forward path spectrum (col. 6, line 10) from the head end (fig. 5) to a plurality of network fiber nodes (fig. 6, the filters 315 and 625 lead to different fiber nodes), the system comprising: a plurality of head end modulators (fig. 5, the system comprising the set of 220, 215, 205, and 210 is considered a first head end modulator and the set of 520, 515, 505, and 210 is considered a second head end modulator), each modulator directly receiving a switchable digital data signal (from 502 and 503) and internally processing the switchable digital data signal to produce the HFC forward path spectrum that directly drives an associated network fiber node (drives it through fiber 110), wherein each individual modulator processes its received switchable digital data signal to dynamically allocate bandwidth to different services (col. 6, lines 7-10) to provide an essentially narrow cast approach among the plurality of modulators (col. 5, lines 50-53) .

Regarding claim 16, Farhan teaches that the head end modulator generates an analog optical signal for the network fiber node (fig. 5, 205 and 502).

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Regarding claim 19, Farhan teaches that the switchable digital data is received as a single digital data input (fig. 5, 502 to 205).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-5 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sayyah.

Regarding claims 4-5 and 11-12, Sayyah teaches all the limitations as applied to claims 1 and 8 except for the limitation that the signal is received in the form of a 1 GigE signal or a 10 GigE signal. Sayyah discloses that it is desirable to the bandpass in the range of 10 GHz (paragraph 0041). It would have been obvious to one of ordinary skill in the art at the time of invention to receive signals in the form of a 1 GigE signal or a 10 GigE signal because these are known cost-effective switchable technologies that could possibly provide increased flexibility at the head end (Applicant specification, page 1, lines 24-26).

6. Claims 4-5 and 11-12 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farhan.

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Regarding claims 4-5 and 11-12 and 17-18, Farhan teaches all the limitations as applied to claims 1 and 8 except for the limitation that the signal is received in the form of a 1 GigE signal or a 10 GigE signal. It would have been obvious to one of ordinary skill in the art at the time of invention to receive signals in the form of a 1 GigE signal or a 10 GigE signal because these are known cost-effective switchable technologies that could possibly provide increased flexibility at the head end (Applicant specification, page 1, lines 24-26).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lee whose telephone number is (571) 272-2220. The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**M. R. SEDIGHIAN**  
**PRIMARY EXAMINER**

DJL